

WHAT IS CLAIMED IS:

1. A communications system, comprising:  
a mobile unit operable to transmit coded content;  
a plurality of base transceiver stations, each base transceiver station operable

5 to:

receive the coded content from the mobile unit;  
decode the content;  
generate a packet including the decoded content; and  
communicate the packet; and

10 a router operable to:

receive a plurality of redundant packets, each packet generated at a  
different base transceiver station;

select of one of the redundant packets using a packet selection  
technique;

15 communicate the selected packet to a destination; and

communicate selection information relating to the selected packet to  
the base transceiver stations, the base transceiver stations further operable to use the  
selection information to improve the decoding of subsequent coded content received  
from the mobile unit.

2. The system of Claim 1, wherein:

the selection information identifies the content included in the selected packet;  
and

the base transceiver stations use the content of the selected packet as input to a  
noise correction algorithm.

3. The system of Claim 2, wherein the selection information comprises a  
packet identifier of the selected packet.

4. The system of Claim 1, wherein each base transceiver station is operable to:

determine, in response to receiving the selection information, the differences between the decoded content included in the packet selected by the router and the decoded content included in a corresponding packet communicated from the base station; and

adjust the decoding process to correct for any differences.

5. The system of Claim 1, wherein each base transceiver station comprises a Viterbi decoder operable to decode the coded content received from the mobile unit and to receive the selection information to improve the decoding of content from the mobile unit.

6. The system of Claim 5, wherein each base transceiver station comprises a demodulator operable to:

receive the coded content in modulated form from the mobile unit;

demodulate the coded content; and

communicate the coded content in the form of soft bits to the Viterbi decoder, the Viterbi decoder operable to use the soft bits for soft decision decoding.

7. The system of Claim 5, wherein the Viterbi decoder is further operable to use a pilot signal communicated from the mobile unit to improve the decoding of content from the mobile unit.

8. The system of Claim 1, wherein:

each base transceiver station is further operable to determine a value for a metric associated with communications between the mobile unit and the base transceiver station and include the value in the packet; and

the router is further operable to select one of the redundant packets based on the values.

9. The system of Claim 1, wherein the router is operable to select one of the redundant packets based on the content of the packet.

10. The system of Claim 1, wherein the content comprises voice content received from a user of the mobile unit.

11. A base transceiver station, comprising:

an interface operable to receive coded content from a mobile unit;

a processor operable to:

decode the content;

generate a packet including the decoded content;

communicate the packet to a router;

receive selection information from the router, the selection information identifying a packet selected by the router from a plurality of redundant packets, the redundant packets communicated to the router from a plurality of base transceiver stations and including redundant content received at each base transceiver station from the mobile unit; and

use the selection information to improve the decoding of subsequent coded content received from the mobile unit.

12. The base transceiver station of Claim 11, wherein:

the selection information identifies the content included in the selected packet; and

the processor is operable to use the content of the selected packet as input to a noise correction algorithm.

13. The base transceiver station of Claim 12, wherein the selection information comprises a packet identifier of the selected packet.

14. The base transceiver station of Claim 11, wherein the processor is operable to:

determine, in response to receiving the selection information, the differences between the decoded content included in the packet selected by the router and the decoded content included in a corresponding packet communicated from the processor; and

adjust the decoding process to correct for any differences.

15. The base transceiver station of Claim 11, wherein the processor comprises a Viterbi decoder operable to decode the coded content received from the mobile unit and to receive the selection information to improve the decoding of content from the mobile unit.

16. The base transceiver station of Claim 15, wherein the interface comprises a demodulator operable to:

receive the coded content in modulated form from the mobile unit;  
demodulate the coded content; and

communicate the coded content in the form of soft bits to the Viterbi decoder, the Viterbi decoder operable to use the soft bits for soft decision decoding.

17. The base transceiver station of Claim 15, wherein the Viterbi decoder is further operable to use a pilot signal communicated from the mobile unit to improve the decoding of content from the mobile unit.

18. The base transceiver station of Claim 11, wherein the processor is further operable to determine a value for a metric associated with communications between the mobile unit and the base transceiver station and include the value in the packet, the router operable to select one of the redundant packets based on the values.

19. The base transceiver station of Claim 11, wherein the content comprises voice content received from a user of the mobile unit.

20. A method for error correction, comprising:

receiving coded content from a mobile unit;

decoding the content;

generating a packet including the decoded content;

communicating the packet to a router;

receiving selection information from the router, the selection information identifying a packet selected by the router from a plurality of redundant packets, the redundant packets communicated to the router from a plurality of base transceiver stations and including redundant content received at each base transceiver station from the mobile unit; and

using the selection information to improve the decoding of subsequent coded content received from the mobile unit.

21. The method of Claim 20, wherein:

the selection information identifies the content included in the selected packet; and

the method further comprises using the content of the selected packet as input to a noise correction algorithm.

22. The method of Claim 21, wherein the selection information comprises a packet identifier of the selected packet.

23. The method of Claim 20, further comprising:

determining, in response to receiving the selection information, the differences between the content included in the packet selected by the router and the content included in a corresponding packet communicated to the router; and

adjusting the decoding process to correct for any differences.

24. The method of Claim 20, wherein a Viterbi decoder is used to decode the content and to use the selection information to improve the decoding of subsequent coded content received from the mobile unit.

25. The method of Claim 24, further comprising:

receiving the coded content in modulated form from the mobile unit;

demodulating the coded content; and

communicating the coded content in the form of soft bits to the Viterbi

5 decoder, the Viterbi decoder operable to use the soft bits for soft decision decoding.

26. The method of Claim 24, further comprising using a pilot signal

communicated from the mobile unit to improve the decoding of content from the

mobile unit.

27. The method of Claim 20, wherein the content comprises voice content

received from a user of the mobile unit.

28. Communications software embodied in a computer-readable medium and operable to:

receive coded content from a mobile unit;  
decode the content;  
5 generate a packet including the decoded content;  
communicate the packet to a router;

receive selection information from the router, the selection information identifying a packet selected by the router from a plurality of redundant packets, the redundant packets communicated to the router from a plurality of base transceiver stations and including redundant content received at each base transceiver station from the mobile unit; and

use the selection information to improve the decoding of subsequent coded content received from the mobile unit.

29. The software of Claim 28, wherein:  
the selection information identifies the content included in the selected packet;  
and

the software further operable to use the content of the selected packet as input to a noise correction algorithm.

30. The software of Claim 29, wherein the selection information comprises a packet identifier of the selected packet.

31. The software of Claim 28, further operable to:  
determine, in response to receiving the selection information, the differences between the content included in the packet selected by the router and the content included in a corresponding packet communicated to the router; and  
adjust the decoding process to correct for any differences.

32. The software of Claim 28, wherein a Viterbi algorithm is used to decode the content and to use the selection information to improve the decoding of subsequent coded content received from the mobile unit.



33. The software of Claim 32, further operable to:  
receive the coded content in modulated form from the mobile unit;  
demodulate the coded content; and  
communicate the coded content in the form of soft bits to be decoded.

34. The software of Claim 32, further operable to use a pilot signal  
communicated from the mobile unit to improve the decoding of content from the  
mobile unit.

35. The software of Claim 28, wherein the content comprises voice content  
received from a user of the mobile unit.

36. A network device, comprising:

means for receiving coded content from a mobile unit;

means for decoding the content;

means for generating a packet including the decoded content;

5 means for communicating the packet to a router;

means for receiving selection information from the router, the selection information identifying a packet selected by the router from a plurality of redundant packets, the redundant packets communicated to the router from a plurality of base transceiver stations and including redundant content received at each base transceiver station from the mobile unit; and

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means for using the selection information to improve the decoding of subsequent coded content received from the mobile unit.